

the window sash is in closed position and the pin 11 being situated at the end of the plate 4 which is remote from the end at which the pin 7 is positioned.

5 The plate 1 is provided with a number of holes 12 for the reception of screws or the like for fastening the plate to the member 2 or 3 of the window frame to which it is to be affixed and the plate 4 is similarly provided with holes 13  
10 for the reception of screws or the like for fastening it to the member 5 or 6 of the window sash.

The link 9 at the end where it is connected by the pin 10 to the plate 1 is bent, as shown, substantially into the plane of the plate 4. In this way, easy fixing is provided for an easy  
15 movement in the case of windows with projecting transoms and sills. Alternatively, the link can be straight and a washer be inserted between it and the plate 1, around the shank of the pin 10.

20 For clearance and easy movement, moreover, there may be a washer between the plate 1 and the plate 4, around the shank of the pin 7, the effect of this washer being to space the plates 1 and 4 a short distance of clearance from one another as the parts of the hinge move in the  
25 opening and closing movements thereof.

In Figures 2 and 3, the window sash is shown in chain line at 14 and in Figure 3, the window frame is shown, also in chain line, at 15. It  
30 will be seen from a perusal of the Figures 2 and 3 that when the window is in closed position and the parts of the hinge are correspondingly in closed position, one edge of the window sash, namely the edge marked 16, is adjacent the end  
35 of the plate 1 of the hinge at which the pin 10 is situated, while when the window is in open position and the parts of the hinge are correspondingly in open position, the said edge 16 of the window sash is removed along the direc-  
40 tion of the length of the plate 1 to a position adjacent the opposite end of that plate from the end at which the said pin is situated. The result is, as hereinbefore described, that a person's hand and arm can be inserted between the opened  
45 window and the edge 17 of the window frame (see Figure 3) corresponding to the edge 16 of the window sash.

Figure 3 also shows in chain line at 18 the movable parts 4, 9 of the hinge in the relative positions they occupy in the course of their opening movement to the fully open positions in which they appear in full line in Figure 3.

As will be seen, the casement window shown in Figure 4 comprises four separate windows 19,  
55 20, 21, 22, two of which, namely the upper two, hinge about horizontal axes and the other two about vertical axes. In the case, therefore, of the two lower windows, the plates 1 of the hinges are affixed to the horizontal members 2, 3 of the window frame, while in the case of the two upper  
60 windows, the said plates 1 are affixed to the side members of the window frame.

It will be understood, of course, that the improved form of hinge according to the present  
65 invention can be applied either to wood-framed windows, fanlights and the like, or to those which are constructed with metal frames, the general principle of operation and construction of the hinge being the same in both cases.

70 What I claim as my invention and desire to secure by Letters Patent of the United States is:

1. A hinge for a hinged window, fanlight or the like, arranged to open outwardly, the hinge serving pivotally to connect the sash of the win-  
75 dow or the like to the frame thereof and com-

prising in combination a longitudinally slotted frame plate which is arranged to be affixed to the frame of the window or the like in face to face contact with an inner edge of a frame member extending transversely to the axis of hinging of the sash; a sash plate which is arranged to be affixed to the sash in face to face contact with an outer edge of a sash member which when the sash is in closed position in the frame overlies the said frame member, said sash plate overlying said frame plate in contiguous face to face relation when the sash is in closed position in the frame, and said sash plate being pivotally and slidably connected to the frame plate by a pin engaging in the slot in said frame plate and slidable along said slot as the sash is opened and closed; and a link pivotally connected at one end to the frame plate at a point near the end thereof whereat the pin of the sliding connection of the two plates is positioned when the sash  
20 is in closed position in the frame, and at the other end to the sash plate at the end thereof remote from the end at which the said pin is positioned.

2. A hinge for a hinged window, fanlight or the like, arranged to open outwardly, the hinge serving pivotally to connect the sash of the win-  
25 dow or the like to the frame thereof and comprising in combination a longitudinally slotted frame plate which is arranged to be affixed to the frame of the window or the like in face to face contact with an inner edge of a frame member extending transversely to the axis of hinging of the sash; a sash plate which is arranged to be affixed to the sash in face to face  
30 contact with an outer edge of a sash member which when the sash is in closed position in the frame overlies the said frame member, said sash plate overlying said frame plate in contiguous face to face relation when the sash is in closed position in the frame, and said sash plate being pivotally and slidably connected to the frame plate by a pin engaging in the slot in the frame plate and slidable along said slot as the sash is opened and closed; and a link pivotally connected  
40 at one end to the frame plate at a point near the end thereof whereat the pin of the sliding connection of the two plates is positioned when the sash is in closed position in the frame, and at the other end to the sash plate at the end thereof remote from the end at which the said pin is positioned, the points of pivotal connection of the link to the frame and sash plates being positioned to that side thereof which is towards the exterior of the frame of the window or the like and the frame and sash plates being formed with laterally projecting lugs disposed in substantially the same plane as their respective plates to accommodate the connections.

3. A hinge for a hinged window, fanlight or the like, arranged to open outwardly, the hinge serving pivotally to connect the sash of the window or the like to the frame thereof and comprising in combination a longitudinally slotted frame plate which is arranged to be affixed to the frame of the window or the like in face to face contact with an inner edge of a frame member extending transversely to the axis of hinging of the sash; a sash plate which is arranged to be affixed to the sash in face to face contact with an outer edge of a sash member which when the sash is in closed position in the frame overlies the said frame member, said sash plate overlying said frame plate in contiguous face to face relation when the sash is  
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